UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
MOORTHY, ARAVIND K

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/745,909	PODAR ET AL.
	Examiner	Art Unit	
	Aravind K Moorthy	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>*25 August 2004*</u>. ·

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,4-17,19-32 and 34-47* is/are pending in the application.

    4a) Of the above claim(s) *3,18 and 33* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,4-17,19-32 and 34-47* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *21 December 2000* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 2, 4-17, 19-32 and 34-47 are pending in the application.

2. Claims 1, 2, 4-17, 19-32 and 34-47 have been rejected.

3. Claims 3, 18 and 33 have been cancelled.

Response to Amendment

4. The examiner approves the amendment made to the specification. No new matter has been added.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 2, 4-17, 19-32 and 34-47 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1, 2, 4, 5, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 43, 44 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon U.S. Patent No. 6,351,467 B1 in view of Novaes U.S. Patent No. 6,791,981 B1.**

As to claims 1, 16 and 31 Dillon discloses a method for authenticated access to multicast traffic, comprising:

receiving a request for a user to join a multicast channel [column 20, lines 46-54];

authenticating access privileges of the user to the multicast channel [column 21, lines 27-38];

and disallowing the request in response to at least an unsuccessful authentication [column 21, lines 27-38].

Dillon does not teach that that the multicast channel comprises an Internet protocol (IP) multicast channel and the request comprises an Internet group management protocol (IGMP) join request.

Novaes teaches a multicast channel that comprises an Internet protocol (IP) multicast channel and the request comprises an Internet group management protocol (IGMP) join request [column 8, lines 39-59].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Dillon so that the multicast channel would have comprised an Internet protocol (IP) multicast channel and the request would have comprised an Internet group management protocol (IGMP) join request.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Dillon by the teaching of Novaes because multicast datagrams are only received if specific group subscriptions exist in a node to keep the overhead of the beacon program to a minimum [column 8, lines 39-59].

As to claims 2, 17 and 32 Dillon teaches authenticating access privileges of the user comprises:

determining whether the user has access privileges to the multicast channel based on previously provisioned information for the user [column 21, lines 27-38];

and unsuccessfully authenticating access privileges of the user to the multicast channel in response to at least the user not having access privileges to the multicast channel [column 21, lines 27-38].

As to claims 4, 19 and 34, Dillon teaches allowing the request in response to at least successful authentication [column 21, lines 27-38].

As to claims 5, 20 and 35, Dillon teaches that the multicast channel comprises at least one of video, audio, data and combinational content [column 8 line 66 to column 9 line 2].

As to claims 13, 28 and 43, Dillon teaches that the request is a subscriber join request [column 7, lines 47-53].

As to claims 14, 29 and 44, Dillon teaches that authenticating access privileges of the user comprises:

> determining whether the multicast channel is a controlled access multicast channel [column 17, lines 2-17];
>
> and authenticating access privileges of the user to the multicast channel in response to at least the multicast channel comprising the controlled access multicast channel [column 17, lines 18-23].

As to claim 46, Dillon discloses a method for providing premium content services over a network using Internet protocol (IP) multicast channels, comprising:

> provisioning user access privileges to an IP multicast channel providing premium content, the premium content including at least one of video, audio and data [column 8 line 66 to column 9 line 2];

authenticating access privileges of a user to the IP multicast channel upon

receiving a request for the user to join the IP multicast channel to receive the

premium video content [column 9, lines 6-10];

and disallowing the request in response to unsuccessful authentication [column 9,

lines 6-10].

Dillon does not teach that that the multicast channel comprises an Internet protocol (IP)

multicast channel and the request comprises an Internet group management protocol (IGMP) join

request.

Novaes teaches a multicast channel that comprises an Internet protocol (IP) multicast

channel and the request comprises an Internet group management protocol (IGMP) join request

[column 8, lines 39-59].

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Dillon so that the multicast channel would have

comprised an Internet protocol (IP) multicast channel and the request would have comprised an

Internet group management protocol (IGMP) join request.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Dillon by the teaching of Novaes because multicast

datagrams are only received if specific group subscriptions exist in a node to keep the overhead

of the beacon program to a minimum [column 8, lines 39-59].

7. Claims 6, 7, 21, 22, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Dillon U.S. Patent No. 6,351,467 B1 and Novaes U.S. Patent No. 6,791,981 B1 as

applied to claims 1, 16 and 31 above, and further in view of Lloyd et al U.S. Patent No. 6,219,790 B1.

As to claims 6, 7, 21, 22, 36 and 37, the Dillon-Novaes combination does not teach prior to receiving the request, provisioning the user's access privileges in an authentication, authorization, and accounting (AAA) server. Dillon does not teach accessing the AAA server to authenticate access privileges of the user to the multicast channel. Dillon does not teach an AAA server that comprises a remote authentication dial-in user service (RADIUS) server.

Lloyd et al teaches provisioning a user's access privileges in an authentication, authorization, and accounting (AAA) server [column 4, lines 22-29]. Lloyd et al teaches accessing an AAA server to authenticate access privileges of a user [column 5, lines 33-41]. Lloyd et al teaches an AAA server that comprises a remote authentication dial-in user service (RADIUS) server [column 6, lines 49-53].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination so that there would have been an in an authentication, authorization, and accounting (AAA) server. The AAA server would have been used to authenticate access privileges of the user to the multicast channel. The AAA server would have comprised a remote authentication dial-in user service (RADIUS) server.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination by the teaching of Lloyd et al because the AAA server supports a variety of authentication transport protocols used by a

variety of client types and is capable of supporting accounting functionality from the same

database used to store user authentication and authorization information [column 2, lines 40-45].

8. Claims 8, 23 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dillon U.S. Patent No. 6,351,467 B1 and Novaes U.S. Patent No. 6,791,981 B1 as applied to

claims 1, 16 and 31 above, and further in view of Dynarski et al U.S. Patent No. 6,466,571

B1.

As to claims 8, 23 and 38, the Dillon-Novaes combination teaches that the multicast

channel comprises an Internet protocol (IP) multicast channel, as discussed above.

The Dillon-Novaes combination does not teach that the request includes an IP address of

the user device, further comprising determining the user based on the IP address of the device.

Dynarski et al teaches that the request includes an IP address of the user device.

Dynarski et al teaches determining the user based on the IP address of the device [column 5,

lines 36-56].

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified the Dillon-Novaes combination so that the request

would have included an IP address of the user device. The user would have been determined

based on the IP address of the device.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified the Dillon-Novaes combination by the teaching of

Dynarski et al because it ensures only authorized devices have access to the services available on

the network.

9. Claims 9, 24 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon U.S. Patent No. 6,351,467 B1 and Novaes U.S. Patent No. 6,791,981 B1 as applied to claims 1, 16 and 31 above, and further in view of Gupta et al U.S. Patent No. 6,718,387 B1.

As to claims 9, 24 and 39, the Dillon-Novaes combination does not teach determining whether the multicast channel comprises a public multicast channel. The Dillon-Novaes combination does not teach successfully authenticating access privileges of the user to the multicast channel in response to at least the multicast channel comprising the public multicast channel.

Gupta et al teaches determining whether the multicast channel comprises a public multicast channel. Gupta et al teaches successfully authenticating access privileges of the user to the multicast channel in response to at least the multicast channel comprising the public multicast channel [column 6 lines 9-44].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination so that it would have been determined whether the multicast channel comprised a public multicast channel. Access privileges would have been successfully authenticated of the user to the multicast channel in response to at least the multicast channel comprising the public multicast channel.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination by the teaching of Gupta et al because this ensures that if the multicast is private a check is made to determine whether the join request submitted is a duplicate of a pervious request and thus prevents any unauthorized users to gain access with a duplicated request [column 6 lines 9-44].

10. Claims 10-12, 25-27 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon U.S. Patent No. 6,351,467 B1 and Novaes U.S. Patent No. 6,791,981 B1 as applied to claims 1, 16 and 31 above, and further in view of Ronen U.S. Patent No. 6,026,441.

As to claims 10-12, 25-27 and 40-42, the Dillon-Novaes combination does not teach determining whether the user is logged in to a service provider providing the multicast channel. The Dillon-Novaes combination does not teach unsuccessfully authenticating access privileges of the user to the multicast channel in response to at least the user not logged in to the service provider.

Ronen teaches determining whether the user is logged in to a service provider. Ronen teaches unsuccessfully authenticating access privileges of the user in response to at least the user not logged in to the service provider [column 2, lines 54-66].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination so that it would have been determined whether the user was logged in to a service provider that provided the multicast channel. The user would not have been successfully authenticated to access privileges if the user were not logged on to the service provider.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination by the teaching of Ronen because by ensuring that the user is logged on and that it is a known user, it enhances security so that a third party does not try and intercept services.

11. Claims 15, 30 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon U.S. Patent No. 6,351,467 B1 and Novaes U.S. Patent No. 6,791,981 B1 as applied to claims 1, 16 and 31 above, and further in view of Hooper et al U.S. Patent No. 5,671,225.

As to claims 15, 30 and 45, the Dillon-Novaes combination does not teach determining if authentication is enabled at an access router receiving the request. The Dillon-Novaes combination does not teach authenticating access privileges of the user to the multicast channel in response to at least determining that authentication is enabled at the router. The Dillon-Novaes combination does not teach allowing the request in response to at least determining authentication is not enabled.

Hooper et al teaches determining if authentication is enabled at an access router receiving the request. Hooper et al teaches authenticating access privileges of the user to the multicast channel in response to at least determining that authentication is enabled at the router. Hooper et al teaches allowing the request in response to at least determining authentication is not enabled [column 3, lines 33-42].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination so that it would have been determined if authentication had been enabled at an access router receiving the request. Access privileges of the user to the multicast channel would have been authenticated in response to at least determining that authentication had been enabled at the router. The request would have been allowed in response to at least determining authentication has not been enabled.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Dillon-Novaes combination by the teaching of Hooper

et al because by doing authentication on a proxy (i.e. router) it reduces the chances of the service

provider of getting attacked by a third party.

12. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al U.S.

Patent No. 6,718,387 B1 in view of Ronen U.S. Patent No. 6,026,441 and Novaes U.S. Patent

No. 6,791,981 B1.

As to claim 47, Gupta et al discloses receiving a request for a user to join an Internet

protocol (IP) multicast channel. Gupta et al discloses authenticating access privileges of the user

to the IP multicast channel by determining whether the IP multicast channel is a public multicast

channel. Gupta et al discloses successfully authenticating access privileges of the user to the IP

multicast channel in response to at least one of determining the multicast channel is a public

multicast channel [column 6 lines 9-44].

Gupta et al does not teach determining that the user is logged in to the service provider

and the service. Gupta et al does not teach unsuccessfully authenticating access privileges of the

user to the IP multicast channel in response to at least one of determining the user is not logged

in to the service provider and determining the user is not logged in to the service. Gupta et al

does not teach terminating the request in response to at least an unsuccessful authentication.

Gupta et al does not teach processing the request in response to at least a successful

authentication. Gupta et al does not teach that that the multicast channel comprises an Internet

protocol (IP) multicast channel and the request comprises an Internet group management

protocol (IGMP) join request.

Ronen teaches determining that the user is logged in to the service provider and the

service. Ronen teaches unsuccessfully authenticating access privileges of the user to the IP

multicast channel in response to at least one of determining the user is not logged in to the service provider and determining the user is not logged in to the service. Ronen teaches terminating the request in response to at least an unsuccessful authentication. Ronen teaches processing the request in response to at least a successful authentication [column 2, lines 54-66].

Novaes teaches a multicast channel that comprises an Internet protocol (IP) multicast channel and the request comprises an Internet group management protocol (IGMP) join request [column 8, lines 39-59].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al so that it would have been determined whether the user was logged in to a service provider and the service. The request would have been terminated in response to at least an unsuccessful authentication. The request would have been processed in response to at least a successful authentication. The multicast channel would have comprised an Internet protocol (IP) multicast channel and the request would have comprised an Internet group management protocol (IGMP) join request.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al by the teaching of Ronen because by ensuring that the user is logged on and that it is a known user, it enhances security so that a third party does not try and intercept services. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Gupta et al by the teaching of Novaes because multicast datagrams are only received if specific group subscriptions exist in a node to keep the overhead of the beacon program to a minimum [column 8, lines 39-59].

Conclusion

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy
January 19, 2005

Primary Examiner